

Title (en)  
CHOKE AND IMPROVED NEEDLE TIP THEREFOR

Publication  
**EP 0279103 A3 19891108 (EN)**

Application  
**EP 87307839 A 19870904**

Priority  
US 1613087 A 19870218

Abstract (en)  
[origin: EP0279103A2] A choke includes a body (12) with an internal valve chamber (18), an inlet (14) and an outlet (16) communicating through the body into the valve chamber. A valve seat (20) surrounds the opening of the outlet into the valve chamber, and a valve member (30) is mounted within said body to move toward and away from said valve seat to control flow therethrough. Means are provided for moving the valve member in the body. The valve member (30) has a stem (32) and a replaceable, wear-resistant tip (42) which is provided with a sleeve insert (48) secured within the stem opening and has internal threads which mate with external threads on the end of the stem. The tip recess includes a groove (62) into which a portion of the sleeve insert is swaged to secure it tightly into the tip.

IPC 1-7  
**F16K 1/48**

IPC 8 full level  
**F16K 1/32** (2006.01); **F16K 1/38** (2006.01); **F16K 1/48** (2006.01)

CPC (source: EP KR US)  
**F16K 1/34** (2013.01 - KR); **F16K 1/38** (2013.01 - EP US); **F16K 1/482** (2013.01 - EP US); **Y10S 251/903** (2013.01 - EP US); **Y10T 137/5983** (2015.04 - EP US); **Y10T 137/6069** (2015.04 - EP US)

Citation (search report)

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- [A] US 2192339 A 19400305 - WILSON WYLIE G
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- [A] GB 2014280 A 19790822 - LUCAS INDUSTRIES LTD
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Designated contracting state (EPC)  
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0279103 A2 19880824; EP 0279103 A3 19891108; EP 0279103 B1 19930414**; AT E88254 T1 19930415; CA 1291977 C 19911112; DE 3785446 D1 19930519; DE 3785446 T2 19930729; JP S63203973 A 19880823; KR 880010267 A 19881007; MX 167127 B 19930305; NO 167104 B 19910624; NO 167104 C 19911002; NO 874131 D0 19871001; NO 874131 L 19880819; US 4705062 A 19871110

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**EP 87307839 A 19870904**; AT 87307839 T 19870904; CA 546254 A 19870908; DE 3785446 T 19870904; JP 24569487 A 19870929; KR 870010184 A 19870915; MX 843787 A 19870922; NO 874131 A 19871001; US 1613087 A 19870218